

Name: \_\_\_\_\_



# ***New York State Testing Program***

---

**2023**

**English Language Arts Test  
Session 1**

**Grade 8**

**April 19–21, 2023**

**RELEASED QUESTIONS**

# Session 1



## TIPS FOR TAKING THE TEST

Here are some suggestions to help you do your best:

- Be sure to read all the directions carefully.
- Most questions will make sense only when you **read the whole passage**. You may need to read the passage more than once to answer a question.
- When a question includes a quotation from a passage, you **may** need to review **both** the quotation and the whole passage in order to answer the question correctly.
- Read each question carefully and think about the answer before making your choice or writing your response.
- In writing your responses, be sure to
  - clearly organize your writing;
  - completely answer the questions being asked;
  - support your responses with examples or details from the text; and
  - write in complete sentences using correct spelling, grammar, capitalization, and punctuation.

**Directions**  
Read this story. Then answer questions 1 through 7.

*In this historical fiction, Margaret Bourke-White, an early female photographer, is still in college. The year is 1927.*

**Excerpt from *Girl with a Camera:*  
*Margaret Bourke-White,*  
*Photographer***

*by Carolyn Meyer*

- 1        My exams went fairly well, and my grades were satisfactory if not stellar.<sup>1</sup> In my final semester I signed up for a journalism course. Other students in the class were hoping to become newspaper reporters; I was more interested in magazine work and submitted a photo-essay—pictures of doorways with very little text—for an assignment. The professor was the advisor for the *Cornell Alumni*<sup>2</sup> *News*, and he thought the editor might want to feature my photographs of campus buildings. The editor looked them over and paid me five dollars each for three pictures. It seemed like a fortune! When the magazine came out, several graduates of the department of architecture wrote to praise the pictures, and one alumnus suggested that I specialize in architectural photography. He said my pictures were that good. It was the encouragement I craved.
- 2        But I wasn't sure that with no professional experience I could actually land such a job—and I did need to find work. To play it safe, I sent an application to the American Museum of Natural History in New York. The curator of herpetology<sup>3</sup> invited me to come for an interview. He seemed so impressed by my application that I thought the offer of a position might be imminent.<sup>4</sup>
- 3        I was nearly twenty-two, about to graduate, and unsure which to follow—my head and my long interest in natural science, or my heart and my passion for photography. A job at the museum would be the safe choice. Or I could try to pursue a career in architectural photography, even though I had no specific training in the field. I had to know if the men who praised my photographs were right, or if they simply enjoyed my pictures of their alma mater.<sup>5</sup> My future hung in the balance.
- 4        I asked the letter-writer to recommend someone qualified to give me an objective opinion. His reply: "See Benjamin Moskowitz, York & Sawyer, Architects, NYC. Good luck."

**GO ON**

- 5        During the Easter vacation I booked a cheap room and took the train to New York City, where I arrived late on Thursday and went straight to the Park Avenue address of York & Sawyer. At their office on the twenty-third floor I asked the switchboard operator for Mr. Moskowitz.
- 6        “I think Mr. Moskowitz has already left, miss. I know he was planning a long weekend. Did you have an appointment?” . . .
- 7        She sighed and asked my name and told me to wait while she tried to see if he might still be there. I paced nervously, thinking that my time and money and my best chance for an expert opinion had been thrown away. The operator rang his office; no answer. “Sorry, but it looks like you’re out of luck, Miss White,” she said.
- 8        Why hadn’t I planned this better? Called for an appointment? Taken an earlier train? How could I have made such a mistake? I was close to tears.
- 9        Just then a tall, gray-haired man, beautifully groomed, strode through the reception area. The switchboard operator signaled me and mouthed, “That’s him.”
- 10       I didn’t hesitate. “Oh, Mr. Moskowitz!” I called out. “Just a moment, sir, please! I’d like to speak to you.”
- 11       He glanced at his expensive-looking gold watch and kept walking. “Sorry, I have a train to catch,” he said brusquely. “I don’t believe you had an appointment.”
- 12       I hurried after him toward the elevator. “I apologize, sir, but I was told to talk to you and to show you some photographs.” I mentioned the Cornell graduate who had given me his name. . . .
- 13       “Miss White, I have a train to catch. I’m sure your photographs are very good or he would not have sent you to see me, but unfortunately I have no time to look at them or talk to you now.”
- 14       He checked his watch impatiently and rang again for the elevator. “It’s always slow when I’m most in a hurry,” he muttered.
- 15       “Let me show you just one photograph while we’re waiting,” I pleaded, and opened the portfolio. The picture on top was a view of the river from the library tower, the highest point on campus. I’d climbed that tower at dawn and at sunset and at every possible time in between to catch the light on the water at exactly the right moment and framed the shot through lacy grillwork.
- 16       Mr. Moskowitz glanced at it, impatiently at first and then more carefully a second time. “You took this photograph?” he asked doubtfully.
- 17       “Yes, these pictures are all my work.” I rushed through my story—the elevator could arrive at any moment. “Mr. Moskowitz, I have to know if you think I have the ability to become a professional in this field.”
- 18       The elevator gate clattered open. “Going down!”

19 “Never mind, Chester,” Mr. Moskowitz told the operator. “We don’t need you now.”  
He motioned for me to follow him. “Come with me. I want to have a look at the rest of  
these.”

20 As we hurried through the reception room, Mr. Moskowitz called out to the  
switchboard operator, “Ring up Sawyer and York and anyone else who’s still here and tell  
them to come to the conference room.” . . .

21 For the next hour they asked me questions about my age—I fibbed a bit, adding a  
couple of years—my education, and my experience. At the end of the hour I walked out of  
the offices of York & Sawyer with their assurance that any architect in the country would  
willingly pay for my services. I wanted to celebrate, and when I stopped for something to  
eat, I could scarcely keep from telling my good news to the tired-looking waitress behind  
the counter.

---

<sup>1</sup>**stellar:** extremely good

<sup>2</sup>**alumni:** people who have previously graduated from an educational institution

<sup>3</sup>**curator of herpetology:** person at the museum in charge of snake collections

<sup>4</sup>**imminent:** about to happen

<sup>5</sup>**alma mater:** school, college, or university that one attended in the past

**GO ON**

**1**

Which statement **best** expresses a theme in paragraphs 6 through 8?

- A** People should take time to recognize the work of others.
- B** Thinking ahead and making plans is important.
- C** Crying is sometimes a good way to get attention.
- D** People can have anxiety when meeting someone new.

**2**

Which quotation **best** supports a central idea of the story?

- A** “I asked the letter-writer to recommend someone qualified . . .” (paragraph 4)
- B** “During the Easter vacation I booked a cheap room and took the train to New York City . . .” (paragraph 5)
- C** “I apologize, sir, but I was told to talk to you and to show you some photographs.” (paragraph 12)
- D** “Mr. Moskowitz, I have to know if you think I have the ability to become a professional in this field.” (paragraph 17)

**3**

How does the dialogue in paragraphs 19 and 20 propel events in the story?

- A** It suggests that Mr. Moskowitz requires help judging the narrator’s work.
- B** It shows that Mr. Moskowitz is impressed by the narrator’s picture.
- C** It indicates that Mr. Moskowitz reluctantly agrees to speak with the narrator.
- D** It reveals that Mr. Moskowitz will likely help the narrator in her career.

4

Which quotation shows a change in the direction of the story?

- A “The operator rang his office; no answer. ‘Sorry, but it looks like you’re out of luck, Miss White,’ she said.” (paragraph 7)
- B “I didn’t hesitate. ‘Oh, Mr. Moskowitz!’ I called out. ‘Just a moment, sir, please! I’d like to speak to you.’ ” (paragraph 10)
- C “ ‘Never mind, Chester,’ Mr. Moskowitz told the operator. ‘We don’t need you now.’ ” (paragraph 19)
- D “For the next hour they asked me questions about my age . . . my education, and my experience.” (paragraph 21)

5

Which event from the story **most** affects the narrator’s feelings about her future career?

- A She receives payment for her pictures published in the *Cornell Alumni News*.
- B Several graduates of the department of architecture praise her work.
- C She is invited to a job interview at the American Museum of Natural History.
- D Several experts confirm that she has a talent for architectural photography.

6

What effect do the shifting attitudes of the switchboard operator and Mr. Moskowitz have on the story?

- A They create a mood of suspense.
- B They introduce confusion to the plot.
- C They build a tone of disappointment.
- D They reinforce the central conflict.

**GO ON**

7

The saying “Do not put all your eggs in one basket” means that a person should not depend on one idea or possibility for success. Which of the narrator’s actions in the story represents this saying?

- A She submits a photo-essay for her journalism course assignment.
- B She agrees to publish her photographs in the *Cornell Alumni News*.
- C She applies for a job at the American Museum of Natural History.
- D She fails to make an appointment with Mr. Moskowitz.



## **D**irections

Read this story. Then answer questions 22 through 28.

*Miyax, also known as Julie, is a 13-year-old girl who is lost in the Alaskan wilderness.*

### **Excerpt from *Julie of the Wolves***

*by Jean Craighead George*

- 1 Miyax pushed back the hood of her sealskin parka and looked at the Arctic sun. It was a yellow disc in a lime-green sky, the colors of six o'clock in the evening and the time when wolves awoke. Quietly she put down her cooking pot and crept to the top of a dome-shaped frost heave, one of the many earth buckles that rise and fall in the crackling cold of the Arctic winter. Lying on her stomach, she looked across a vast lawn of grass and moss and focused her attention on the wolves she had come upon two sleeps ago. They were wagging their tails as they awoke and saw each other.
- 2 Her hands trembled and her heartbeat quickened, for she was frightened, not so much of the wolves, who were shy and many harpoon-shots away, but because of her desperate predicament. Miyax was lost. She had been lost without food for many sleeps on the North Slope of Alaska. The barren slope stretches for two hundred miles from the Brooks Range to the Arctic Ocean, and for more than eight hundred miles from Canada to the Chukchi Sea. No roads cross it; ponds and lakes freckle its immensity. Winds scream across it, and the view in every direction is exactly the same. Somewhere in this cosmos was Miyax; and the very life in her body, its spark and warmth, depended upon these wolves for survival. And she was not so sure they would help. . . .
- 3 She had been watching the wolves for two days, trying to discern<sup>1</sup> which of their sounds and movements expressed goodwill and friendship. Most animals had such signals. The little Arctic ground squirrels flicked their tails sideways to notify others of their kind that they were friendly. By imitating this signal with her forefinger, Miyax had lured many a squirrel to her hand. If she could discover such a gesture for the wolves she would be able to make friends with them and share their food, like a bird or a fox.
- 4 Propped on her elbows with her chin in her fists, she stared at the black wolf, trying to catch his eye. She had chosen him because he was much larger than the others, and because he walked like her father, Kapugen, with his head high and his chest out. The black wolf also possessed wisdom, she had observed. The pack looked to him when the wind carried strange scents or the birds cried nervously. If he was alarmed, they were alarmed. If he was calm, they were calm.

**GO ON**

- 5 Long minutes passed, and the black wolf did not look at her. He had ignored her since she first came upon them, two sleeps ago. True, she moved slowly and quietly, so as not to alarm him; yet she did wish he would see the kindness in her eyes. Many animals could tell the difference between hostile hunters and friendly people by merely looking at them. But the big black wolf would not even glance her way.
- 6 A bird stretched in the grass. The wolf looked at it. A flower twisted in the wind. He glanced at that. Then the breeze rippled the wolverine ruff on Miyax's parka and it glistened in the light. He did not look at that. She waited. Patience with the ways of nature had been instilled in her by her father. And so she knew better than to move or shout. Yet she must get food or die. Her hands shook slightly and she swallowed hard to keep calm. . . .
- 7 Amaroq<sup>2</sup> glanced at his paw and slowly turned his head her way without lifting his eyes. He licked his shoulder. A few matted hairs sprang apart and twinkled individually. Then his eyes sped to each of the three adult wolves that made up his pack and finally to the five pups who were sleeping in a fuzzy mass near the den entrance. The great wolf's eyes softened at the sight of the little wolves, then quickly hardened into brittle yellow jewels as he scanned the flat tundra.
- 8 Not a tree grew anywhere to break the monotony of the gold-green plain, for the soils of the tundra are permanently frozen. Only moss, grass, lichens, and a few hardy flowers take root in the thin upper layer that thaws briefly in summer. Nor do many species of animals live in this rigorous<sup>3</sup> land, but those creatures that do dwell here exist in bountiful numbers. Amaroq watched a large cloud of Lapland longspurs wheel up into the sky, then alight in the grasses. Swarms of crane flies, one of the few insects that can survive the cold, darkened the tips of the mosses. Birds wheeled, turned, and called. Thousands sprang up from the ground like leaves in the wind.
- 9 The wolf's ears cupped forward and tuned in on some distant message from the tundra. Miyax tensed and listened, too. Did he hear some brewing storm, some approaching enemy? Apparently not. His ears relaxed and he rolled to his side. She sighed, glanced at the vaulting sky, and was painfully aware of her predicament. . . .
- 10 It had been a frightening moment when two days ago she realized that the tundra was an ocean of grass on which she was circling around and around. Now as that fear overcame her again she closed her eyes. When she opened them her heart skipped excitedly. Amaroq was looking at her!

<sup>1</sup>**discern:** determine

<sup>2</sup>**Amaroq:** Miyax's name for the wolf

<sup>3</sup>**rigorous:** demanding, difficult

**22** The word choice in paragraph 2 affects the tone of the story by

- A** developing a sense of appreciation for the setting
- B** indicating a possible direction for the plot
- C** creating a sense of anxiety for the main character
- D** suggesting a possible resolution for the conflict

**23** What do the details in paragraphs 3 and 4 reveal about Miyax?

- A** She has enjoyed learning about the habitats of different wild animals.
- B** She believes her father would be able to develop a friendship with the wolf.
- C** She has developed an understanding of nature and animal behaviors.
- D** She plans to share new animal signals that she learns with her family.

**24** Which detail supports a theme of the story?

- A** “She had been lost without food for many sleeps on the North Slope of Alaska.” (paragraph 2)
- B** “Patience with the ways of nature had been instilled in her by her father.” (paragraph 6)
- C** “Then his eyes sped to each of the three adult wolves that made up his pack and finally to the five pups . . .” (paragraph 7)
- D** “Not a tree grew anywhere to break the monotony of the gold-green plain . . .” (paragraph 8)

**GO ON**

25

Which quotation **best** reveals Miyax's attitude toward Amaroq?

- A "The pack looked to him when the wind carried strange scents or the birds cried nervously." (paragraph 4)
- B "True, she moved slowly and quietly, so as not to alarm him; yet she did wish he would see the kindness in her eyes." (paragraph 5)
- C "The great wolf's eyes softened at the sight of the little wolves, then quickly hardened into brittle yellow jewels as he scanned the flat tundra." (paragraph 7)
- D "Miyax tensed and listened, too. Did he hear some brewing storm, some approaching enemy?" (paragraph 9)

26

How does the author's use of language in paragraph 10 contribute to the tone of the story?

- A by giving a name to the leader of the wolf pack
- B by illustrating how the land has inspired Miyax to not give up
- C by using geographical terms to describe the setting
- D by reinforcing Miyax's senses of danger and hope

27

**This question is worth 2 credits.**

In “Excerpt from *Julie of the Wolves*,” how do details about the setting affect the story? Use **two** details from the story to support your response.

Write your response for this question in your separate Session 1 Answer Booklet.

Writing on this page will not be scored.

28

**This question is worth 2 credits.**

In many parts of the world, wolves are typically feared by humans. How does the author of “Excerpt from *Julie of the Wolves*” present a contrast to this idea? Use **two** details from the story to support your response.

Write your response for this question in your separate Session 1 Answer Booklet.

Writing on this page will not be scored.

**STOP**

Name: \_\_\_\_\_



# ***New York State Testing Program***

---

**2023**

**English Language Arts Test  
Session 2**

**Grade 8**

**April 19–21, 2023**

**RELEASED QUESTIONS**

# Session 2



## TIPS FOR TAKING THE TEST

Here are some suggestions to help you do your best:

- Be sure to read all the directions carefully.
- Most questions will make sense only when you **read the whole passage**. You may need to read the passage more than once to answer a question.
- When a question includes a quotation from a passage, you **may** need to review **both** the quotation and the whole passage in order to answer the question correctly.
- Read each question carefully and think about the answer before making your choice or writing your response.
- In writing your responses, be sure to
  - clearly organize your writing;
  - completely answer the questions being asked;
  - support your responses with examples or details from the text; and
  - write in complete sentences using correct spelling, grammar, capitalization, and punctuation.
- For the last question in this test book, you may plan your writing on the Planning Page provided, but do NOT write your final answer on this Planning Page. Writing on this Planning Page will NOT count toward your final score. Write your final answer on the lined response pages provided.

## **D**irections

Read this story. Then answer questions 29 through 35.

*In a faraway kingdom called Tellus, Aleks signs up for the army. Then he finds out what a dishonest and brutal place it is.*

### Excerpt from *The Almost King*

*by Lucy Saxon*

- 1        Slinging his light saddlebag over his shoulders and swallowing his cry of pain at the movement, he pulled his hat low over his forehead and made for the door. He needed his enlistment forms from Shulga's office; if he could find and destroy them, the army would have no record of him enlisting. Even if he did get caught after escaping—provided he escaped in the first place—there would be no proof that he was a cadet.<sup>1</sup> Then all he had to do was reach the stables and get Quicksilver before anyone on the dinner shift noticed what he was doing. After that . . . he would find a way out. There had to be one somewhere. . . .
- 2        There were no guards at the door; the barracks<sup>2</sup> was down to a skeleton guard for the dinner shift. Aleks silently retraced his steps from earlier in the day, making his way towards Antova's office. His eyes raced over every door's nameplate, frowning when none of them was the office he was looking for. He was incredibly short on time; he had to be on Quicksilver and heading for freedom before dinner ended.
- 3        Finally, he saw it. *Lt. Shulga* was embossed on a nameplate three doors down from Antova's. Luckily, the door was unlocked and the room empty; Shulga had obviously gone straight from the time-out room to dinner. The office was decorated in the same way as Antova's, in blue and dark brown, with a large map of Tellus on the wall instead of the royal crest the commander displayed. Darting across to a metal filing cabinet that took up most of one wall, Aleks wrenched open a drawer at random, ignoring the searing ache in his arms. Again, unlocked. Clearly Shulga was too cocky to think anyone would dare snoop around his office.
- 4        The drawer was full of neatly filed enlistment forms in alphabetical order; F–J. Aleks's form would come under V. Shutting the drawer, he reached for the next one, perplexed to find it containing M–P. The drawer after that didn't contain enlistment forms at all, but instead held a large stack of account books. Shulga didn't seem to have any sort of system whatsoever; how did he ever find anything he needed?

**GO ON**



- 5           Growling in frustration, Aleks began to open multiple drawers at a time, rifling through stacks of papers and leather-bound books, his desperation growing with every unsuccessful attempt. Digging through a drawer of miscellaneous files and books closest to the desk, his fingers scrabbled at the bottom of the drawer and it tilted a fraction, sending three stacked files slumping against a small metal box. ‘What the . . .’ He trailed off, pressing harder on the base of the drawer, watching it dip under his fingers. The drawer had a false bottom!
- 6           Aleks glanced at the clock; he knew he shouldn’t, but he’d always been the curious type. Emptying the drawer, he dug his nails under one side of the fake bottom, prising it up. The secret compartment was fairly narrow, containing only a thin file of papers and a battered leather journal. It was the journal that caught Aleks’s eye, for it had the Anglyan crest embossed in one corner of the cover. What on Tellus was Shulga doing with an Anglyan journal? . . .
- 7           A door slamming somewhere in the building startled him out of his horrified trance, and a quick look at the clock nearly gave Aleks a heart attack. He barely had ten minutes until the end of dinner!
- 8           Stuffing the journal in an inner pocket of his coat, he hastily replaced the drawer’s false bottom and contents, shutting it as quietly as he could. Tugging on the two drawers he had yet to check, he swore under his breath. Neither of them contained a V section, and Aleks felt dread creep over him at the realization that his file was likely elsewhere. He didn’t have the time to search any other rooms. Out of options, he straightened up, shoving all the cabinet drawers shut and sprinting for the door.
- 9           A quick glance through the glass panel showed the corridor to be empty, so Aleks slipped from the room.
- 10          Bursting through the door of the building, he turned for the stables, slowing his pace once he hit the cobblestone path, just in case anyone happened to look his way. There was nothing more suspicious than a lone cadet running.
- 11          While there was supposed to be at least one stablehand in the building at all times, Aleks couldn’t see a single soul in the stables. Perfect. Hurrying to the tack<sup>3</sup> room, he easily found Quicksilver’s saddle and bridle, though carrying the heavy items in his current state nearly sent him crumpling to the floor. Still, he forced himself to ignore the pain, hefting the tack across the room towards Quicksilver’s stall.

- 12        The horse whinnied when he saw the tack, knowing what it meant. Aleks shushed him, slinging the saddle on the door and slipping inside, easing the bridle on to the horse's head. Tossing the saddle on Quicksilver's back, he fastened it tightly and slung the saddlebag over the horse's rear, buckling it swiftly. He grabbed the reins, running to press Quicksilver's nose to his chest for a brief moment. 'We need to be quiet, boy. No getting excited.'

---

<sup>1</sup>**cadet:** new member of the armed services

<sup>2</sup>**barracks:** place where soldiers sleep

<sup>3</sup>**tack:** stable gear such as saddles and bridles

**GO ON**

**29** How does the author's description of Aleks's plan in paragraph 1 impact the tone of the story?

- A** It creates irony because everything happens the way Aleks thinks it will.
- B** It creates confidence that Aleks will succeed because he knows what he must do.
- C** It creates suspense as the reader wonders if something will go wrong for Aleks.
- D** It creates confusion because not everything happens the way Aleks wants it to.

**30** What important idea does the author develop in paragraphs 1 and 2?

- A** The Tellus army is poorly prepared for action.
- B** Aleks has a plan that is based on the army's routines.
- C** Aleks is unsure about which office has his army enlistment papers.
- D** The Tellus army guards will soon return to the barracks from dinner.

**31** Which sentence states a theme of paragraph 3?

- A** Overconfidence can lead to carelessness.
- B** Pride in one's kingdom is essential to military success.
- C** Pain can prevent a person from reaching one's goal.
- D** Trust is difficult to establish and maintain.

32

How does Aleks's attitude change in paragraph 5?

- A It shifts from exhausted to curious.
- B It shifts from panicked to confident.
- C It shifts from distracted to focused.
- D It shifts from annoyed to surprised.

33

The saying "Don't let anything stop you" is an encouragement to pursue and achieve a goal despite obstacles. Which quotation from the story **best** reflects this idea?

- A "After that . . . he would find a way out. There had to be one somewhere." (paragraph 1)
- B "Luckily, the door was unlocked and the room empty; Shulga had obviously gone straight from the time-out room to dinner." (paragraph 3)
- C "Aleks glanced at the clock; he knew he shouldn't, but he'd always been the curious type." (paragraph 6)
- D "A quick glance through the glass panel showed the corridor to be empty, so Aleks slipped from the room." (paragraph 9)

34

Read these sentences from paragraph 12.

**'We need to be quiet, boy. No getting excited.'**

What do these sentences reveal about Aleks?

- A He is aware that dangers may still await him.
- B He is questioning his decision to leave the army.
- C He is unfamiliar with how this horse will react.
- D He is reconsidering his plan of escape.

**GO ON**

35

Which sentence would be **most** important to include in a summary of the story?

- A Aleks notices that Shulga's office is decorated the same as Antova's office.
- B Aleks finds an Anglyan journal in a secret compartment in Shulga's office.
- C Aleks fears someone is coming when he hears a door slam in the building.
- D Aleks slows his pace to avoid suspicion as he approaches the stables.

**GO ON**

## **D**irections

Read this article. Then answer questions 36 through 42.

# Robotic Fish to Keep a Fishy Eye on the Health of the Oceans

*by JoAnna Klein*

1        You're a fish in the ocean.

2        It's 2023 and humans have begun deploying swarms of sentinel robot fish along the reef where you live that will monitor your environment, track pollution and collect intelligence on your behavior. Welcome to the future, my finned fishy friends.

3        O.K., so you're not a fish. And this sci-fi fishland doesn't exist. But it could—not long from now.

4        Allow me to introduce SoFi—like “Sophie,” but short for “Soft Robotic Fish,” revealed in Science Robotics, by scientists at the Massachusetts Institute of Technology Computer Science and Artificial Intelligence Lab.

5        They explained how their finned robot was created, and how her first ocean swim on a coral reef outside of Fiji went. Robotic fish like her could be essential to understanding and protecting marine life in danger of disappearing in a fragile ocean environment, threatened by human activity and climate change.

6        This foot-and-a-half long robot mimics a real fish. She can swim in the ocean at speeds up to half-its-body-length a second and at depths up to 60 feet below the surface. SoFi has a battery that will last 45 minutes before she shuts down.

7        She's not quite fish flesh, but she's not a typical marine robot either. Although critical for studying the ocean, remote operated vehicles and submersibles<sup>1</sup> can be expensive to build and operate. They also can startle the sea creatures they're supposed to study. But without a line giving her away by connecting her to a boat, a noisy propeller or the big, rigid, awkward or angular body of a metallic land-alien, she doesn't seem to bother or scare off real fish. Some even swim along with her. Sleek, untethered, relatively inexpensive and well-tolerated, SoFi may provide biologists a fish's-eye view of animal interactions in changing marine ecosystems.

8        For this group of MIT roboticists, SoFi was a dream, combining their love of diving with their work on soft robots. She was also an engineering challenge.

9        SoFi started as a nine-inch silicon tail that wiggled with the assistance of a hydraulic pump.

**GO ON**

- 10 “I was amazed at how well it was working, how well I was able to get this tail to beat back and forth or swim left and right, like a shark or some other fish,” said Robert Katzschmann, a graduate student at MIT who led the team. “But we wanted to show this wasn’t just working on a test bench or table top.”
- 11 SoFi had to swim in the ocean—at multiple depths.
- 12 This meant waterproofing, buoyancy control, tweaking weight distributions and figuring out an unobtrusive<sup>2</sup> way to share information underwater. It also meant compact equipment.
- 13 “We wanted to build a fish,” said Mr. Katzschmann. “And the fish can’t be as big as a submarine—unless we wanted to build a whale.”
- 14 A couple years later SoFi had a finned body and head equipped with a camera, two-way hydrophone, battery, environmental sensors, operating system and communication system that allowed a diver to issue commands using a souped-up Super Nintendo controller.
- 15 The communication system was the biggest challenge, said Mr. Katzschmann, because normally it requires a cable. Common remote signals used for piloting aerial drones don’t travel below water.
- 16 But sound waves do.
- 17 They built their own language, sending coded messages on high-pitched sound waves between SoFi and the diver. Different bits of information were assigned their own tones, kind of like how numbers are represented by dial tones when you make a phone call. A processing system decoded and relayed the messages to tell the diver things like “SoFi is currently swimming forward” or command her to “turn left, 20 degrees.”
- 18 The high-pitched signals only travel about 65 feet and are inaudible to fish, although it’s possible some whales or dolphins could hear them, which may require future research.
- 19 “Our primary goal was to make something for biologists,” said Mr. Katzschmann. He envisions a future network of sensor-clad SoFis for studying schooling dynamics<sup>3</sup> or monitoring pollution over time. Currently he’s working on primitive A.I. so SoFi can use her footage to identify and track real fish.
- 20 But what if a real fish—or a shark—tracks SoFi instead?
- 21 “If a shark would have come and ate our fish, that would have been the most amazing footage,” Mr. Katzschmann said.

---

<sup>1</sup>**submersibles:** boats designed to do underwater research

<sup>2</sup>**unobtrusive:** barely noticeable

<sup>3</sup>**schooling dynamics:** forces that influence change as fish travel together in schools

36

Why does the author use the phrase “my finned fishy friends” in paragraph 2?

- A to highlight the serious issues facing ocean life
- B to make readers feel a connection to the article
- C to establish the importance of SoFi’s fin technology
- D to help readers understand the ocean environment

37

Read this sentence from paragraph 7.

**She’s not quite fish flesh, but she’s not a typical marine robot either.**

Which detail about SoFi **best** supports the idea expressed in this sentence?

- A SoFi may contribute to the protection of endangered marine life.
- B SoFi can swim at speeds that are similar to some fish.
- C Fish are not scared by SoFi and sometimes swim with her.
- D Divers issue commands to SoFi using a simple controller.

38

Which detail from the article **best** shows the author’s point of view about SoFi?

- A “Robotic fish like her could be essential to understanding and protecting marine life in danger of disappearing . . .” (paragraph 5)
- B “This foot-and-a-half long robot mimics a real fish.” (paragraph 6)
- C “I was amazed at how well it was working, how well I was able to get this tail to beat back and forth or swim left and right . . .” (paragraph 10)
- D “And the fish can’t be as big as a submarine—unless we wanted to build a whale.” (paragraph 13)

**GO ON**



**39** Which statement **best** explains how the ideas in paragraph 8 relate to the details in paragraphs 12 through 14?

- A** Engineers want to build a robot to explore marine life.
- B** Engineers create a system to guide SoFi underwater.
- C** Engineers focus on design requirements to achieve their goal.
- D** Engineers develop SoFi to think and act like a small fish.

**40** One aspect of technology that is often stressed is its negative impact on the environment. Which detail from the article presents a contrast to this idea?

- A** “They explained how their finned robot was created, and how her first ocean swim on a coral reef outside of Fiji went.” (paragraph 5)
- B** “But without a line giving her away by connecting her to a boat . . . she doesn’t seem to bother or scare off real fish.” (paragraph 7)
- C** “SoFi started as a nine-inch silicon tail that wiggled with the assistance of a hydraulic pump.” (paragraph 9)
- D** “The high-pitched signals only travel about 65 feet and are inaudible to fish, although it’s possible some whales or dolphins could hear them . . .” (paragraph 18)

**41** In paragraph 21, Mr. Katzschmann reacts positively to the idea that a shark might eat SoFi because that would

- A** lead to further funding and research
- B** test the strength of the underwater system
- C** help biologists understand how to protect marine life
- D** support the goal of studying animal interactions

**42**

Which idea would be **most** important to include in a summary of the article?

- A** SoFi uses coded messages to communicate.
- B** SoFi receives commands from a remote control.
- C** SoFi is an important tool for understanding ocean life.
- D** SoFi is designed to swim at different speeds in the ocean.

***GO ON***

## ***D*irections** Read this article. Then answer question 43.

*Matt Trott works for the U.S. Fish and Wildlife Service.*

### **Excerpt from *Keep the “Wild” in Wildlife: Don’t Touch or Feed***

*by Matt Trott*

- 1        People often think doing nothing is quite easy, but sometimes it can be awfully hard. Many of us want to help wildlife when they appear to be in trouble, but in some cases, we need to redirect these instincts.
- 2        Generally, the best thing to do is leave the animal alone. This protects both you and the animal. . . .
- 3        Young wildlife usually are not orphaned, even if a parent can’t be seen. For example, deer leave fawns alone for hours to look for food, and baby birds often leave the nest before they can fly, hopping around on the ground for days with the parents sometimes elsewhere getting food. . . .
- 4        By trying to help wildlife, you might really be hurting them. A man in Georgia recently saw a manatee<sup>1</sup> out of the water. Concerned it was stuck, the man pushed the manatee back into the water. Scientists said the manatee was very likely just sunbathing on a warm December day.
- 5        Your “help” could also end up hurting you. The man in Georgia was fine, but even people trained in manatee rescues are injured occasionally. Manatees may look slow and too bulky to cause injury, but a lot of strength and energy is hidden within their thick hide. . . .
- 6        Finally, wild animals are hardier than we think. A recent car commercial depicts a couple “rescuing” a bird from cold weather and driving it south. This type of activity is illegal (unless permitted) and can be dangerous for the humans and the animal. Transferring a bird or other wildlife may disorient<sup>2</sup> it or cause other problems.
- 7        Sometimes, though, wildlife definitely need our help. You’ll know a wild animal needs help if it has a visibly broken limb, is bleeding, has a dead parent nearby, or is hopelessly tangled in some manmade object.
- 8        If that’s the case, contact a licensed wildlife rehabilitator.<sup>3</sup> They are trained and have permits to care for wildlife. They can tell you what steps can be taken until help arrives. Not only that, but if they are truly in need, many animals require expert attention immediately.

**GO ON**

- 9            That's what Officer Richard Bare did when he received a call that some baby raccoons were orphaned after their mother was hit by a car. He took them to a wildlife rehabilitation facility.
- 10           Migratory Bird specialist Bob Murphy did that, too. Last year, while Bob was getting his canoe ready for a canoe trip, a friend spotted an osprey hanging upside down, tangled in fishing line, way up in a nearby pine tree.
- 11           Bob eventually climbed the tree and cut away the fishing line. He then carefully placed the bird into a backpack, climbed down the tree and took the bird to a rehabber. The osprey was somewhat dehydrated and malnourished,<sup>4</sup> had a slightly injured toe and suffered neurological<sup>5</sup> problems from hanging upside down for some time. However, it recovered and was released.
- 12           These are "hands-on" examples of experts providing help when wildlife are in trouble, and they still both involve wildlife rehabilitators. Wildlife rehab is the answer for an injured animal. But, in general, the best bet for your safety, and that of the animal involved, is to leave wildlife alone, whenever possible keeping them truly wild.

<sup>1</sup>**manatee:** a very large mammal that lives in warm waters along the Atlantic coast

<sup>2</sup>**disorient:** confuse, especially about location

<sup>3</sup>**rehabilitator:** a person who helps bring an animal back to its uninjured state; also called a rehabber

<sup>4</sup>**malnourished:** lacking enough food or the right food for good health

<sup>5</sup>**neurological:** nerve

**GO ON**

43

**This question is worth 2 credits.**

Read this sentence from paragraph 12 of “Excerpt from *Keep the ‘Wild’ in Wildlife*.”

**But, in general, the best bet for your safety, and that of the animal involved, is to leave wildlife alone, whenever possible keeping them truly wild.**

What does the phrase “keeping them truly wild” suggest about helping wildlife in trouble? Use **two** details from the article to support your response.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

## **D**irections

Read this article. Then answer questions 44 through 46.

*Stephen R. Swinburne has worked as a park ranger. When he swam alongside a manatee, he reached out and scratched its belly, and the manatee made clicking sounds. They interacted for about a minute before the manatee swam away.*

### **Excerpt from *Saving Manatees***

*by Stephen R. Swinburne*

- 1        My excitement is tinged with<sup>1</sup> guilt, though. I know I shouldn't touch a manatee. I believe in the "no touch" policy when it comes to wild animals. Wild animals remain wild when man does not interfere with their behavior. The naturalist<sup>2</sup> part of me says, "Don't touch," but to satisfy my human curiosity, I reach out. While I struggle with this dilemma on a personal scale, Floridians are grappling with just how close humans and manatees should get.
- 2        Some groups in Florida believe people should not be allowed to "swim with the manatees" or touch them. And there are others, such as diving and snorkeling companies, that believe it's okay to snorkel with wild manatees and okay to touch them.
- 3        I raise the issue with the fourth-graders after our snorkeling trip with the manatees in Crystal River. Should people be allowed to swim with manatees? Why or why not? Many of the students loved snorkeling with manatees. I hear reactions such as "Way cool!", "Awesome!", "The most amazing trip of my life." But after some reflection, Kalli speaks up and says, "Even though it was fun for us, I don't think people should be allowed to swim with manatees or touch them because it disturbs their peacefulness."
- 4        It's the old idea of what one does is fine, but if the thousands of people that search for manatees each year wanted to touch, rather than simply look at manatees, the pressure on the animals would be too much. "Look, but don't touch" may be the best way to mind your manatee manners. And besides, people actually have the most to gain by remaining at a distance when they spot a manatee in the water. By quietly observing manatees, snorkelers will get a rare opportunity to see the natural behavior of these unique animals.
- 5        The one thing swimming with the wild manatees did for all of us was make us advocates<sup>3</sup> for manatees. But in the end, I agree with Kalli. Who knows? Maybe some day people visiting Florida's warm-water springs and rivers may talk about the good old days when people could snorkel with the manatees. Can you imagine that? They actually got in the water and touched a manatee. Those were the days.

**GO ON**

- 6            Some swimmers don't understand how touching a manatee can be harmful to the animal. Save the Manatee Club believes touching manatees can alter their behavior in the wild, perhaps causing them to leave warm-water areas and making them susceptible<sup>4</sup> to potential harm. When manatees are in colder water, they expend valuable energy just to keep warm. This leaves little energy left for other important body functions, such as digestion. Pursuing a manatee while diving, swimming, or boating may inadvertently<sup>5</sup> separate a mother and her calf.

<sup>1</sup>**is tinged with:** contains a little bit of

<sup>2</sup>**naturalist:** person who studies nature

<sup>3</sup>**advocates:** people who work for or argue for a certain cause

<sup>4</sup>**susceptible:** open to risk

<sup>5</sup>**inadvertently:** without meaning to

44

This question is worth 2 credits.

In “Excerpt from *Saving Manatees*,” how does the author develop his position about people swimming with manatees? Use **two** details from the article to support your response.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

**GO ON**



45

This question is worth 2 credits.

How do the ideas developed in paragraph 5 of “Excerpt from *Saving Manatees*” relate to the author’s argument? Use **two** details from the article to support your response.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

*Planning Page*

**You may PLAN your writing for question 46 here if you wish, but do NOT write your final answer on this page. Writing on this Planning Page will NOT count toward your final score. Write your final answer on Pages 21 and 22.**



***GO ON***

46

**This question is worth 4 credits.**

The authors of “Excerpt from *Keep the ‘Wild’ in Wildlife*” and “Excerpt from *Saving Manatees*” have a common goal. What is that common goal? How do the details presented in each article support this goal? Use details from **both** articles to support your response.

In your response, be sure to

- identify a common goal the authors of the articles have
- describe how the details presented in each article support the common goal
- use details from **both** articles to support your response

[illegible]